

## **LISTING OF CLAIMS**

1. **(Currently Amended)** A caching method, comprising:
  - caching data received from a data source within a static cache as stable data, the static cache having a fixed size;
  - evicting a portion of the stable data within the static cache to a dynamic cache when the static cache reaches a threshold fill level; and
  - enrolling the evicted portion of the stable data into the dynamic cache as soft data, the dynamic cache having a dynamically changing size according to availability of memory, where soft data is evicted from the dynamic cache prior to evicting stable data from the static cache if availability of memory is scarce.
2. **(Canceled)**
3. **(Currently Amended)** The caching method of ~~claim 2~~ claim 1, wherein evicting the portion of the stable data further comprises evicting the portion of the stable data to the dynamic cache according to a Least Recently Used eviction policy.
4. **(Previously Presented)** The caching method of claim 1, further comprising:
  - evicting selectively at least some of the soft data from the dynamic cache when the availability of the memory is scarce; and
  - contracting the dynamic cache to release some of the memory consumed by the dynamic cache.
5. **(Original)** The caching method of claim 4, wherein evicting selectively the at least some of the soft data further comprises evicting the at least some of the soft data according to a Least Recently Used eviction policy.
6. **(Previously Presented)** The caching method of claim 4, wherein enrolling the evicted portion of the stable data into the dynamic cache as soft data comprises caching the soft data as hash values of a hash table, the hash values being indexed to keys for accessing the hash values.

7. (Original) The caching method of claim 6, wherein evicting selectively at least some of the soft data from the dynamic cache comprises:

copying at least some of the keys into a garbage queue, the at least some of the keys corresponding to the at least some of the soft data; and

removing at least some of the hash values from the hash table based on the at least some of the keys in the garbage queue.

8. (Original) The caching method of claim 7, wherein a Java Garbage Collector selectively copies the at least some of the keys into the garbage queue.

9. **(Currently Amended)** The caching method of ~~claim 1~~ claim 2, wherein the data comprises first data, the method further comprising:

intercepting a request for second data from the data source;

determining whether the second data is cached within either of the static cache and dynamic cache; and

providing the second data from either of the static cache and the dynamic cache instead of the data source, if the determining determines that the second data is cached.

10. (Previously Presented) The caching method of claim 9, further comprising moving the second data to a most recently used position within the static cache, upon determining that the second data is cached.

11. **(Currently Amended)** The caching method of ~~claim 1~~ claim 2, wherein the static cache and the dynamic cache comprise a hybrid-cache within a single memory device.

12. **(Currently Amended)** The caching method of ~~claim 1~~ claim 2, wherein the stable data and the soft data comprise objects of an object orientated language.

13. (Currently Amended) [[A]] An article of manufacture comprising a machine-accessible medium that provides having instructions stored thereon that, if executed by a machine, will cause the machine to perform operations comprising:

    caching first data received from a data source into a hybrid-cache, the hybrid-cache including a static cache having a fixed size and a dynamic cache having a dynamically changing size;

    enrolling the first data received from a data source into the static cache as stable data;

    evicting selective portions of the stable data within the static cache to the dynamic cache when the static cache is full; and

    enrolling the selective portions of the stable data evicted from the static cache into the dynamic cache as soft data, the dynamic cache having a dynamically changing size according to availability of memory, where soft data is evicted from the dynamic cache prior to evicting stable data from the static cache if availability of memory is scarce.

14. (Canceled)

15. (Currently Amended) The machine-accessible medium article of manufacture of claim 13, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

    expanding the dynamic cache to accommodate the selective portions of the stable data evicted to the dynamic cache, if adequate memory is available; and

    evicting at least some of the soft data from the dynamic cache to accommodate the selective portions of the stable data evicted to the dynamic cache, if adequate memory is not available.

16. (Currently Amended) The machine-accessible medium article of manufacture of claim 15, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

    contracting the dynamic cache to release some of the memory consumed by the dynamic cache, if the memory is scarce.

17. (Currently Amended) The ~~machine-accessible medium article of manufacture~~ of claim 15, wherein enrolling the selective portions of the stable data evicted from the static cache into the dynamic cache as the soft data comprises caching the soft data within the dynamic cache according to a canonical mapping scheme.

18. (Currently Amended) The ~~machine-accessible medium article of manufacture~~ of claim 17, wherein caching the soft data within the dynamic cache according to the canonical mapping scheme comprises caching the soft data as a hash value of a hash table, the hash values being indexed to keys for accessing the hash values.

19. (Currently Amended) The ~~machine-accessible medium article of manufacture~~ of claim 18, wherein evicting the at least some of the soft data from the dynamic cache comprises:  
copying at least some of the keys into a garbage queue, the at least some of the keys corresponding to the at least some of the soft data; and

removing at least some of the hash values from the hash table based on the at least some of the keys in the garbage queue.

20. (Currently Amended) The ~~machine-accessible medium article of manufacture~~ of claim 13, wherein evicting selective portions of the stable data within the static cache comprises evicting the selective portions of the stable data according to a Least Recently Used eviction policy.

21. (Currently Amended) The ~~machine-accessible medium article of manufacture~~ of claim 13, wherein the stable data and the soft data comprise objects of an object orientated language.

22. (Currently Amended) A system, comprising:  
a processor to process requests for data from a data source; and  
a memory device communicatively coupled to the processor, the memory device to hold a hybrid-cache, the hybrid-cache comprising:  
a static cache for caching the data as stable data, the static cache having a fixed size; and

a dynamic cache having a dynamically changing size according to availability of memory within the memory device, wherein portions of the stable data within the static cache are to be evicted to the dynamic cache as soft data when the static cache is full, wherein the dynamic cache is to expand to accommodate the portions of the stable data evicted to the dynamic cache when the static cache is full, if adequate memory is available within the memory device, and wherein the dynamic cache is further to evict at least some of the soft data from the dynamic cache to accommodate the portions of the stable data evicted to the dynamic cache, if adequate memory is not available within the memory device, where soft data is evicted from the dynamic cache prior to evicting stable data from the static cache if availability of memory is scarce.

**23-24. (Canceled)**

**25. (Currently Amended)** The system of claim 24 claim 22, wherein the dynamic cache is further to contract to release memory consumed by the dynamic cache, if other entities within the memory device expand.

**26. (Currently Amended)** The system of claim 24 claim 22, wherein the memory device comprises Random Access Memory (“RAM”) and wherein the data source comprises a data storage device communicatively coupled to the processor, the hybrid-cache to reduce swapping to the data storage device.

**27. (Previously Presented)** The system of claim 22, wherein the system comprises a caching server, wherein the requests for the data from the data source comprise requests from clients of the caching server, and wherein the data source comprises an Internet.

**28. (Previously Presented)** The system of claim 22, wherein the system comprises an Application Server, wherein the requests for the data from the data source comprise requests from clients of the Application Server, and wherein the data source comprises at least one database.

29. (Original) The system of claim 22, wherein the Application Server comprises one of a Java based Application Server and a .NET based Application Server.

30. **(Currently Amended)** A system, comprising:

static means for caching stable data received from a data source within a fixed amount of memory;

first means for selectively evicting portions of the stable data from the static means when the static means is full;

dynamic means for caching soft data within a dynamically changing amount of memory;

**second means for evicting the soft data from the dynamic means when the available amount of memory is scarce;** and

means for enrolling the portions of the stable data evicted by the means for evicting into the dynamic means as the soft data, **for caching the soft data within the dynamically changing amount of the memory based on an available amount of the memory, and for contracting the dynamically changing amount of memory when the available amount of memory is scarce, the dynamic means having a dynamically changing size according to availability of memory, where soft data is evicted from the dynamic means prior to evicting stable data from the static means if availability of memory is scarce.**

31-33. **(Canceled)**

34. (Previously Presented) The caching method of claim 1, wherein the threshold fill level comprises a full static cache.